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**UNITED STATES PATENT AND TRADEMARK OFFICE**

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## Examiner's Detailed Office Action

1. Claims 1-37 are allowed.

## Examiner's Amendment

2. On Tuesday, April 22, 2008, applicant's representative, Hugh P. Gortler, Reg. No. 33,890, authorized examiner to amend the claims byway of Examiner's Amendment. An interview summary has been included.

Regarding claim 1.

A method of using a computer to train a computer-based neural network with input **image** data, the neural network including a plurality of connection weights, the method comprising: using the neural network to rescale the input **image** data; determining errors for the rescaled data; and using neighborhoods of the errors to adjust the connection weights.

Regarding claim 21.

Apparatus for training a neural network on input data **to perform image rescaling**, the neural network having a plurality of connection weights, the apparatus comprising a processor pro-

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grammed to use the neural network to rescale the input data; determine errors for the rescaled data; and use neighborhoods of the errors to adjust the connection weights of the neural network.

Regarding claim 37.

An article for causing a processor to use input **image** data to adjust connection weights of a neural network **so the neural network can perform image rescaling**, the article comprising: computer memory; and data encoded in the computer memory, the data causing the processor to use the neural network to rescale the input **image** data; determine errors for the rescaled data; and use neighborhoods of the errors to adjust the connection weights of the neural network.

### REASONS FOR ALLOWANCE

3. The following is an Examiner's statement for reasons for allowance:
4. Claims 1-37 are considered allowable since when reading the claims in light of the specification, none of the references of record alone or in combination disclose or suggest the combination of limitations specified in the independent claim(s).
5. When taken in context the claim(s) as a whole, were not uncovered in the prior art. Moreover, the dependent claims 2-18, 22-33, 35 & 36 are allowed as they depend upon an allowable independent claim(s).
6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments regarding Statement of Reasons for Allowance."

## Correspondence Information

7. Any inquires concerning this communication or earlier communications from the examiner should be directed to Michael B. Holmes, who may be reached Monday through Friday, between 8:00 a.m. and 5:00 p.m. EST. or via telephone at (571) 272-3686 or facsimile transmission (571) 273-3686 or email [michael.holmesb@uspto.gov](mailto:michael.holmesb@uspto.gov).

If you need to send an Official facsimile transmission, please send it to (571) 273-8300.

If attempts to reach the examiner are unsuccessful the Examiner's Supervisor, Anthony Knight, may be reached at (571) 272-3687.

Hand-delivered responses should be delivered to the Receptionist @ (Customer Service Window Randolph Building 401 Dulany Street Alexandria, VA 22313), located on the first floor of the south side of the Randolph Building.

Finally, information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Moreover, status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) toll-free @ 1-866-217-9197.

***Michael B. Holmes***

Patent Examiner

Artificial Intelligence

Art Unit 2121

United States Department of Commerce  
Patent & Trademark Office

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*Tuesday, April 22, 2008*

*MBH*

*/Michael B. Holmes/  
Primary Examiner, Art Unit 2129*